



Memorandum

To: Provost and Chief Academic Officers

CC: Ohio Mathematics Chairs/Leads and Education Department Chairs

From: Dr. Ricardo Moena, Faculty Lead, Ohio Transfer Module Mathematics, Statistics, and Logic Review Panel/Subgroup 2 of the Ohio Mathematics Initiative Chairs/Leads Network

Date: May 8, 2020

Subject: Announcement of Learning Outcomes for Ohio Transfer Module TMM021 (Mathematics for Elementary Education I) and TMM022 (Mathematics for Elementary Education II)

We are pleased to announce new Ohio Transfer Module (OTM) courses in Mathematics, Statistics, and Logic titled TMM021- Mathematics for Elementary Education I and TMM022- Mathematics for Elementary Education II.

Background:

The Ohio Transfer Module (OTM) Subgroup 2, Mathematics, Statistics, and Logic, were tasked with exploring Mathematics in Elementary Education courses essential for mathematics teachers. This effort was rooted in the fact that teachers of mathematics need to understand the underlying mathematics they are teaching, why various procedures work, how each idea they will be teaching connects with other important ideas in mathematics, and how these ideas develop and become more sophisticated. Knowing only mathematics of the elementary grades is not sufficient to be an effective teacher of elementary grade mathematics.

Mathematics for Elementary Education I (TMM021) is a college level mathematics course. It is intended to be activity based and serve the following purposes:

- Act as preparation for the kinds of mathematics and mathematical experiences essential for mathematical learning and professional development.
- Serve as a pre-requisite for Mathematics in Elementary Education II (TMM022)
- Act as a course integrating reasoning, flexibility, multiple explanations, and number sense. The successful student will understand topics arising from 4 main categories: “Numbers”, “Operations”, “Algebraic Thinking”, and “Number Theory”.

Mathematics for Elementary Education II (TMM022) is a college level mathematics course. It is intended to be activity based and serve the following purposes:

- Act as a course integrating reasoning, flexibility, multiple explanations, and number sense. The successful student will understand topics arising from 4 main categories: “Ratios, Proportional Relationships, and Functions”, “Measurement”, “Geometry”, and “Statistics and Probability”.

In January 2020, a survey request was distributed statewide to gain endorsement for the proposed criteria for the new Mathematics, Statistics, Logic Ohio Transfer Module (OTM) courses. The subgroup reviewed endorsement survey feedback and in order to address concerns expressed by some institutions, the following updates were taking into consideration:

- Emphasized language within the introduction statement clarifying that TMM021-22 explores some middle grade topics at the elementary level. Future teachers need to have knowledge beyond what they are immediately teaching. We also clarified that the course learning outcomes are not specific items/topics but rather learning outcomes of the course as a whole. Institutional courses should provide an integrated experience with learning outcomes woven together throughout the course.
- Minor tweaks on several learning outcomes to better articulate functionality.

The results of the survey indicated that there is strong support for the creation of courses in the area of Mathematics for Elementary Education. This announcement will assist your institution with course development or refining your course(s) to better align with transfer guarantees. As a result, these OTM courses have been added to the Mathematics, Statistics, Logic Ohio Transfer Module (OTM), effective immediately. Institutions will need to submit course(s) for panel review prior to approval. To assist your institution with course development and refining, Subgroup 2 has further been task with creating a supporting illustrations document. The expected timeline to announce this resource is Fall 2020.

Thank you for sharing this memo and attachments with appropriate Mathematics faculty and administrators at your institution.

If you or your OTM coordinator have any questions please contact faculty lead for the Ohio Transfer Module Mathematics, Statistics, and Logic Review Panel/Subgroup 2, Dr Ricardo Moena at ricardo.moena@uc.edu or (513) 556-4055 or Jessi Spencer, Director of Articulation and Transfer Policy, Budget, and Constituent Relations at jspencer@highered.ohio.gov or (614) 728-4706.

Attachments 2